

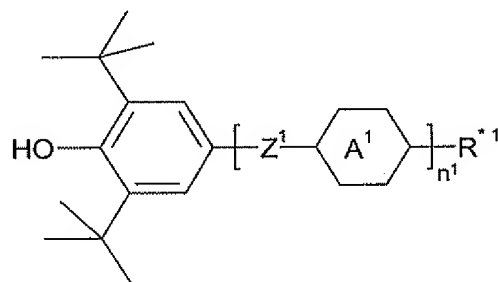
The listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

1. (Previously Presented) A compound according to claim 3, which is capable of inducing a cholesteric phase in a nematic liquid crystal and simultaneously acting as a stabiliser.

2. (Previously Presented) A compound according to claim 3, which is capable of acting as a free-radical scavenger.

3. (Currently Amended) A compound of formula I



I

in which

$R^{*1}$  is a chiral radical,

$Z^1$  is, if present more than once, in each case, independently of one another,  $-\text{CH}_2-\text{CH}_2-$ ,  $-\text{CH}=\text{CH}-$ ,  $-\text{C}\equiv\text{C}-$ ,  $-\text{COO}-$ ,  $-\text{OCO}-$ ,  $-\text{CH}_2\text{O}-$ ,  $-\text{OCH}_2-$ ,  $-\text{CF}_2\text{O}-$ ,  $-\text{OCF}_2-$ ,  $-(\text{CH}_2)_4-$ ,  $-\text{CF}=\text{CF}-$ ,  $-\text{CH}=\text{CF}-$ ,  $-\text{CF}=\text{CH}-$ ,  $-\text{CH}_2-$ ,  $-\text{CF}_2-$ ,  $-\text{CHF}-$ ,  $-\text{O}-$ ,  $-\text{S}-$  or a single bond,



is, if present more than once, in each case, independently of one another,

- (a) a trans-1,4-cyclohexylene radical, in which one or more non-adjacent  $\text{CH}_2$  groups are optionally replaced by  $-\text{O}-$  and/or  $-\text{S}-$ ,
- (b) a 1,4-cyclohexenylene radical,
- (c) a 1,4-phenylene radical, in which one or two  $\text{CH}$  groups are optionally replaced by  $\text{N}$ , or
- (d) 1,4-bicyclo[2.2.2]octylene, piperidine-1,4-diyl, naphthalene-2,6-diyl, decahydronaphthalene-2,6-diyl, or 1,2,3,4-tetrahydronaphthalene-2,6-diyl,

where these radicals (a) to (d) and the phenolic benzene ring is optionally mono- or

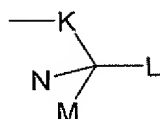
polysubstituted by F atoms, and

$n^1$  is 1, 2 or 3,

wherein

A)

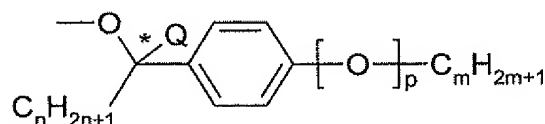
$R^{*1}$  is a chiral radical of the following formula



in which

K is a single bond, alkylene having 1 to 9 C atoms, alkenylene or alkynylene having 2 to 9 C atoms, wherein one, two or more of the  $-CH_2-$  groups present in the alkylene, alkenylene or alkynylene are optionally replaced by  $-O-$ ,  $-C=O-$  or  $-S-$ , but where no two O atoms are bonded directly to one another, and the alkylene, alkenylene or alkynylene are optionally substituted by halogen, or

$R^{*1}$  is

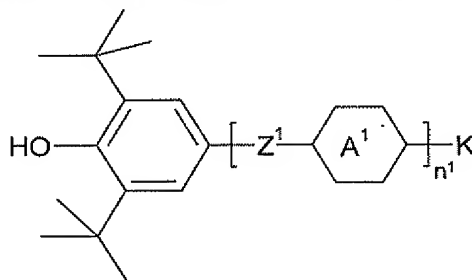


Q is H or halogen,

n and m are different from one another and, independently of one another, are 1 to 11,

p is 0 or 1, and

L, M and N, each, independently of one another, but differently from one another and from



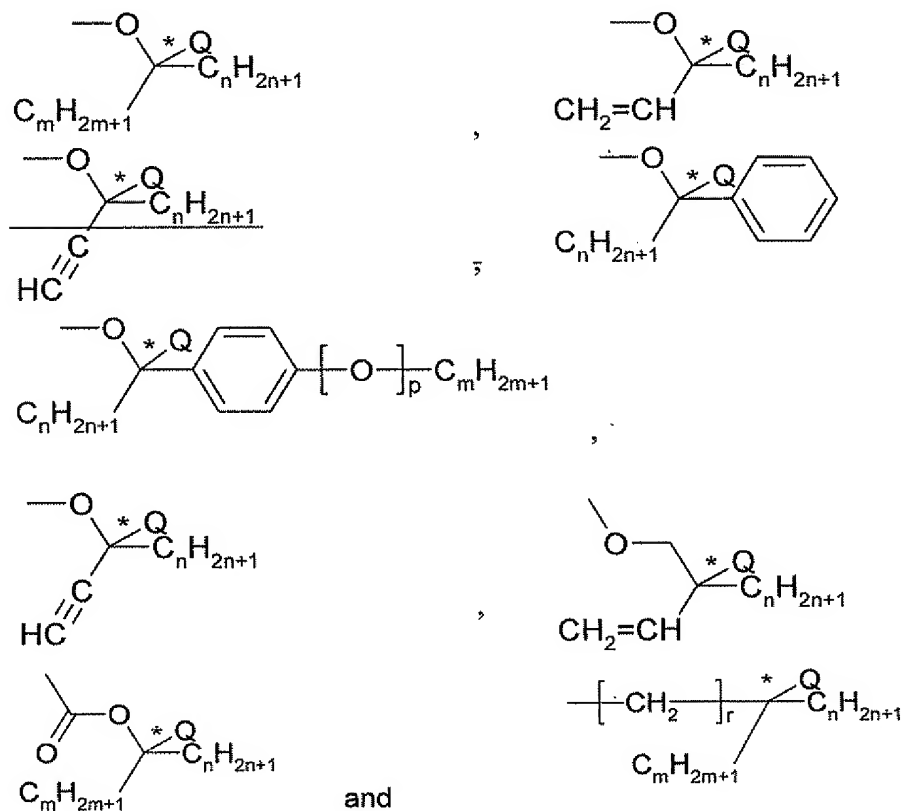
are hydrogen, halogen, aryl or cycloalkyl, alkyl or alkoxy having 1 to 11 C atoms, alkenyl, alkenyloxy, alkynyl or alkynyloxy having 2 to 11 C atoms, where one, two or more of the  $-CH_2-$  groups present in the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally replaced by  $-O-$ ,  $-C=O-$  or  $-S-$ , but where no two O atoms are bonded directly to one another

and the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally substituted by halogen;

or

B)

$R^{*1}$  is a chiral radical of one of the following formulae



and

in which

Q

is H or halogen,

n and m

are different from one another and, independently of one another, are 1 to 11,

p

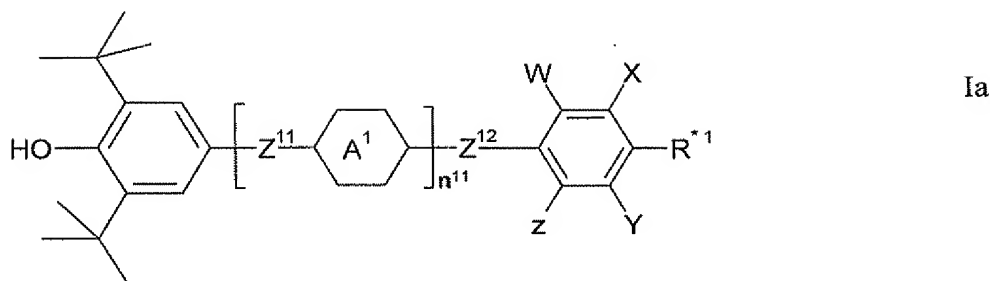
is 0 or 1, and

r

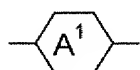
is 0 to 4.

4. (Currently Amended)

A compound of formula Ia



in which



is, if present more than once, in each case, independently of one another,

- (a) a trans-1,4-cyclohexylene radical, in which one or more non-adjacent CH<sub>2</sub> groups are optionally replaced by -O- and/or -S-,
- (b) a 1,4-cyclohexenylene radical,
- (c) a 1,4-phenylene radical, in which one or two CH groups are optionally replaced by N, or
- (d) 1,4-bicyclo[2.2.2]octylene,  
piperidine-1,4-diyl, naphthalene-2,6-diyl,  
decahydronaphthalene-2,6-diyl, or  
1,2,3,4-tetrahydronaphthalene-2,6-diyl,

where these radicals (a) to (d) and the phenolic benzene ring is optionally mono- or polysubstituted by F atoms,

R<sup>\*1</sup> is a chiral radical,

Z<sup>11</sup> and Z<sup>12</sup> are, each independently, and in case if Z<sup>11</sup> present more than once, in each case, independently of one another, -CH<sub>2</sub>-CH<sub>2</sub>-, -CH=CH-, -C≡C-, -COO-, -OCO-, -CH<sub>2</sub>O-, -OCH<sub>2</sub>-, -CF<sub>2</sub>O-, -OCF<sub>2</sub>-, -(CH<sub>2</sub>)<sub>4</sub>-, -CF=CF-, -CH=CF-, -CF=CH-, -CH<sub>2</sub>-, -CF<sub>2</sub>-, -CHF-, -O-, -S- or a single bond,

n<sup>11</sup> is 0, 1 or 2,

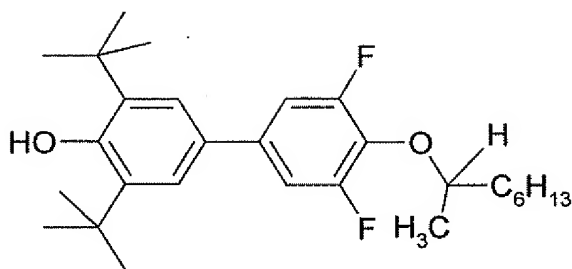
W and Z are each, independently of one another, H, F, Cl, or alkoxy, and

X and Y are each, independently of one another, H, F, Cl, alkyl or alkoxy,

wherein

A)

the compound of formula Ia is



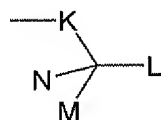
;

or

B)

$R^{*1}$

is a chiral radical of the following formula



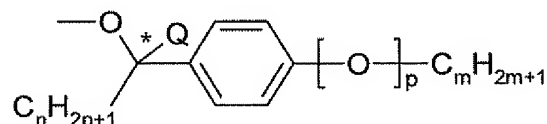
in which

K

is a single bond, alkylene having 1 to 9 C atoms, alkenylene or alkynylene having 2 to 9 C atoms, wherein one, two or more of the  $-CH_2-$  groups present in the alkylene, alkenylene or alkynylene are optionally replaced by  $-O-$ ,  $-C=O-$  or  $-S-$ , but where no two O atoms are bonded directly to one another, and the alkylene, alkenylene or alkynylene are optionally substituted by halogen, or

$R^{*1}$

is



Q

is H or halogen,

n and m

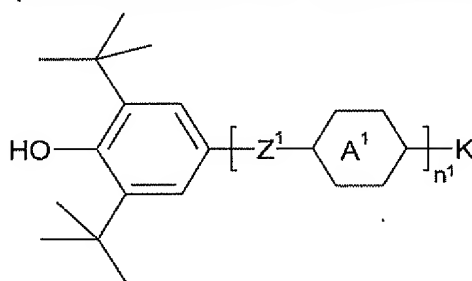
are different from one another and, independently of one another, are 1 to 11,

p

is 0 or 1, and

L, M and N,

each, independently of one another, but differently from one another and from



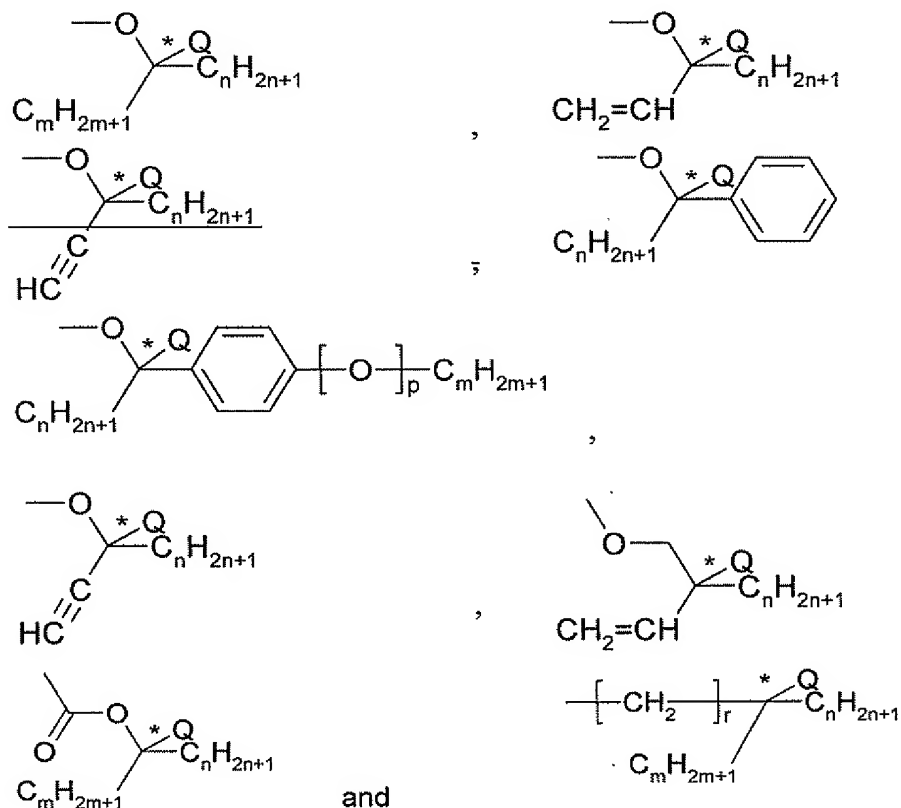
are hydrogen, halogen, aryl or cycloalkyl, alkyl or alkoxy having 1 to 11 C

atoms, alkenyl, alkenyloxy, alkynyl or alkynyloxy having 2 to 11 C atoms, where one, two or more of the  $-\text{CH}_2-$  groups present in the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally replaced by  $-\text{O}-$ ,  $-\text{C}=\text{O}-$  or  $-\text{S}-$ , but where no two O atoms are bonded directly to one another and the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally substituted by halogen;

or

C)

$\text{R}^{*1}$  is a chiral radical of one of the following formulae



in which

Q is H or halogen,

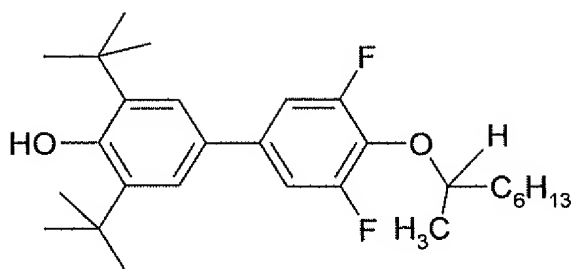
n and m are different from one another and, independently of one another, are 1 to 11,

p is 0 or 1, and

r is 0 to 4,

and wherein one of the following conditions I, II, III, IV or V must be satisfied

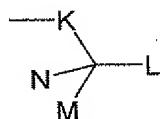
I) wherein the compound is



;

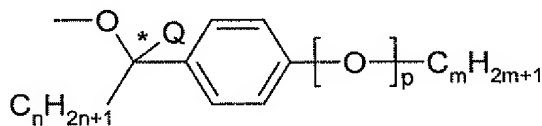
or

II) wherein  
 $R^{*1}$  is a chiral radical of the following formula

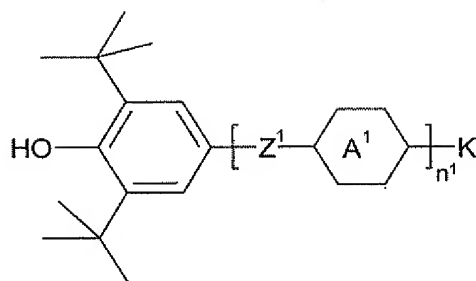


in which

K is a single bond, alkylene having 1 to 9 C atoms, alkenylene or alkynylene having 2 to 9 C atoms, wherein one, two or more of the  $-CH_2-$  groups present in the alkylene, alkenylene or alkynylene are optionally replaced by  $-O-$ ,  $-C=O-$  or  $-S-$ , but where no two O atoms are bonded directly to one another, and the alkylene, alkenylene or alkynylene are optionally substituted by halogen, or  
 $R^{*1}$  is



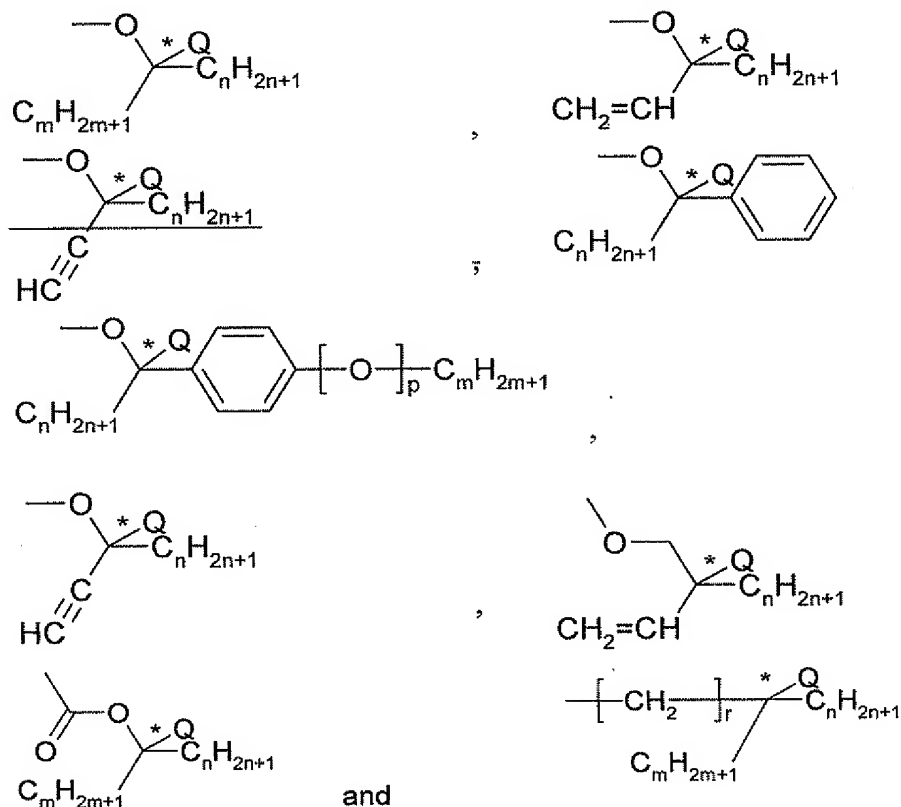
Q is H or halogen,  
 n and m are different from one another and, independently of one another, are 1 to 11,  
 p is 0 or 1, and  
 L, M and N, each, independently of one another, but differently from one another and from



are hydrogen, halogen, aryl or cycloalkyl, alkyl or alkoxy having 1 to 11 C atoms, alkenyl, alkenyloxy, alkynyl or alkynyloxy having 2 to 11 C atoms, where one, two or more of the  $-CH_2-$  groups present in the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally replaced by  $-O-$ ,  $-C=O-$  or  $-S-$ , but where no two O atoms are bonded directly to one another and the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally substituted by halogen;

or

III) wherein  
 $R^{*1}$  is a chiral radical of one of the following formulae



and



in which

Q is H or halogen,  
n and m are different from one another and, independently of one another, are 1 to 11,  
p is 0 or 1, and  
r is 0 to 4;

or

IV) wherein

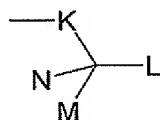
W and Z are each, independently of one another, H, F or Cl;

or

V) wherein

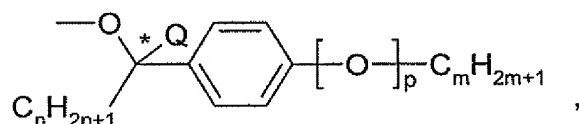
W and Z are both H.

5. (Previously Presented) A compound according to claim 3, wherein  
R\*<sup>1</sup> is a chiral radical of the following formula

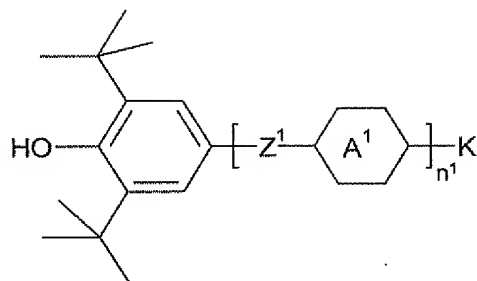


in which

K is a single bond, alkylene having 1 to 9 C atoms, alkenylene or alkynylene having 2 to 9 C atoms, wherein one, two or more of the -CH<sub>2</sub>- groups present in the alkylene, alkenylene or alkynylene are optionally replaced by -O-, -C=O- or -S-, but where no two O atoms are bonded directly to one another, and the alkylene, alkenylene or alkynylene are optionally substituted by halogen, or  
R\*<sup>1</sup> is

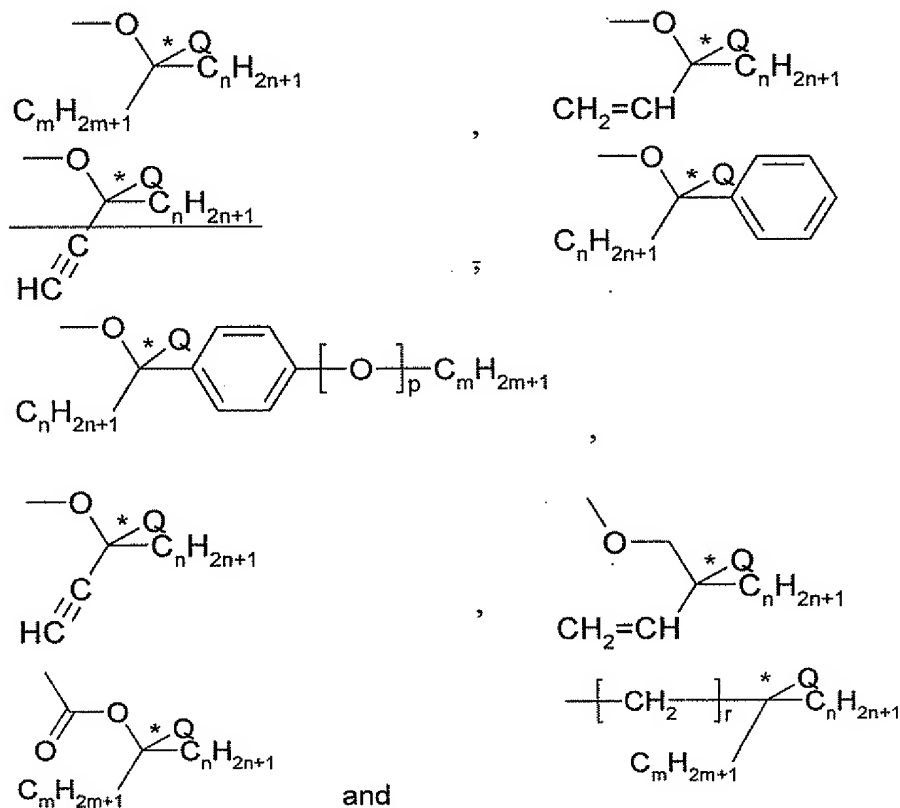


Q is H or halogen,  
n and m are different from one another and, independently of one another, are 1 to 11,  
p is 0 or 1, and  
L, M and N, each, independently of one another, but differently from one another and from



are hydrogen, halogen, aryl or cycloalkyl, alkyl or alkoxy having 1 to 11 C atoms, alkenyl, alkenyloxy, alkynyl or alkynyloxy having 2 to 11 C atoms, where one, two or more of the  $-CH_2-$  groups present in the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally replaced by  $-O-$ ,  $-C=O-$  or  $-S-$ , but where no two O atoms are bonded directly to one another and the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally substituted by halogen.

6. (Currently Amended) A compound according to claim 3, wherein  $R^{*1}$  is a chiral radical of one of the following formulae



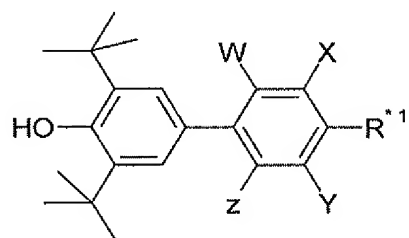
in which

Q

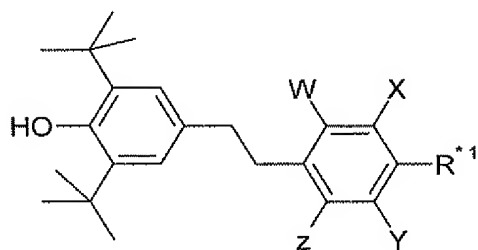
is H or halogen,

n and m are different from one another and, independently of one another, are 1 to 11,  
 p is 0 or 1, and  
 r is 0 to 4.

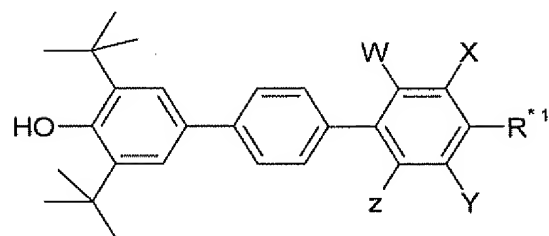
7. (Currently Amended) A compound of formula Ia-2, Ia-3, Ia-4, Ia-5, Ia-6, Ia-7, Ia-8, or Ia-9



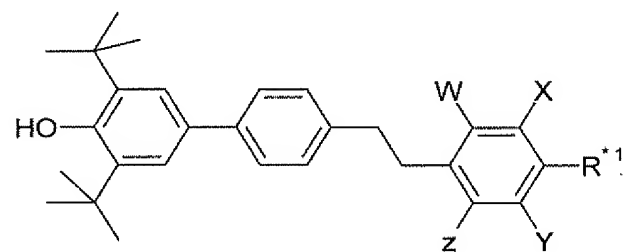
Ia-2



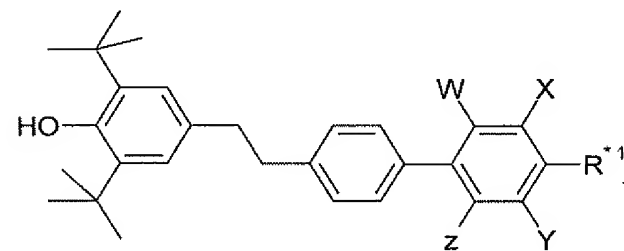
Ia-3



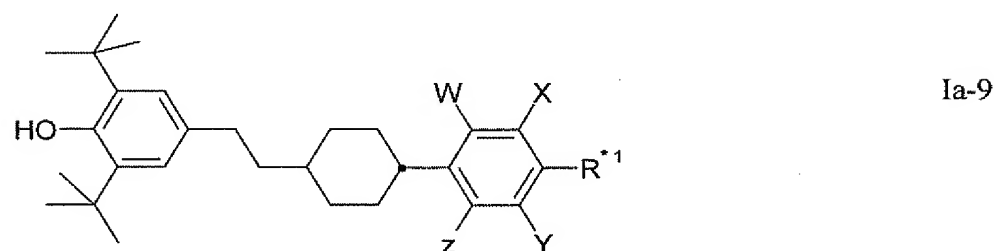
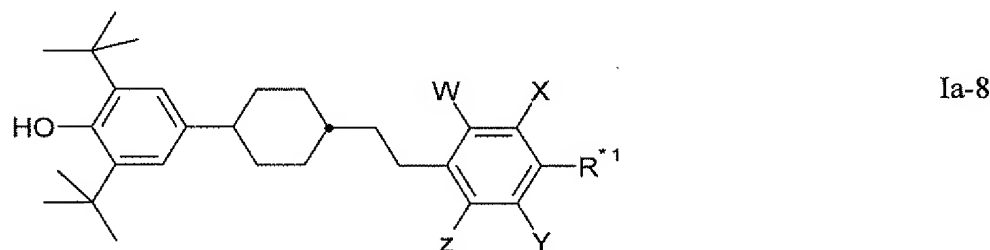
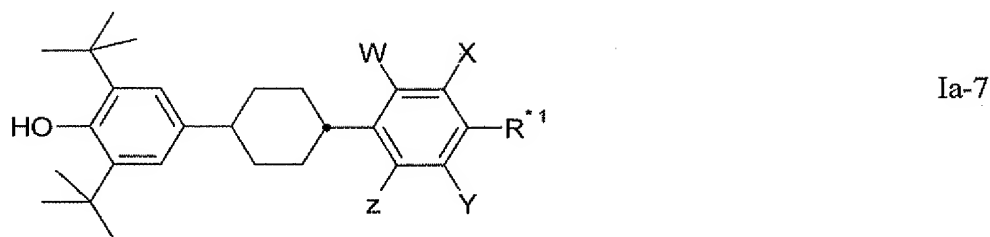
Ia-4



Ia-5



Ia-6



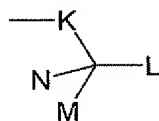
wherein

W, X, Y and Z are each, independently of one another, H, F, Cl, alkyl or alkoxy,  
 $R^{*1}$  is a chiral radical;

wherein

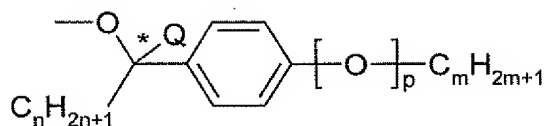
A)

$R^{*1}$  is a chiral radical of the following formula

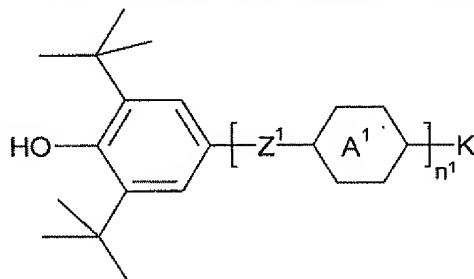


in which

K is a single bond, alkylene having 1 to 9 C atoms, alkenylene or alkynylene having 2 to 9 C atoms, wherein one, two or more of the  $-CH_2-$  groups present in the alkylene, alkenylene or alkynylene are optionally replaced by  $-O-$ ,  $-C=O-$  or  $-S-$ , but where no two O atoms are bonded directly to one another, and the alkylene, alkenylene or alkynylene are optionally substituted by halogen, or  
 $R^{*1}$  is



Q is H or halogen,  
 n and m are different from one another and, independently of one another, are 1 to 11,  
 p is 0 or 1, and  
 L, M and N, each, independently of one another, but differently from one another and from

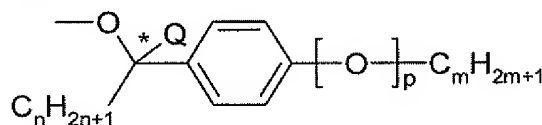
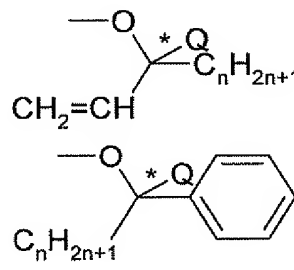
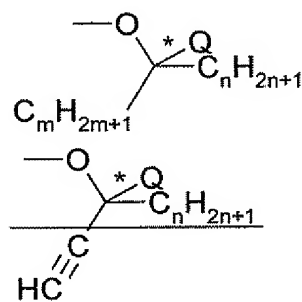


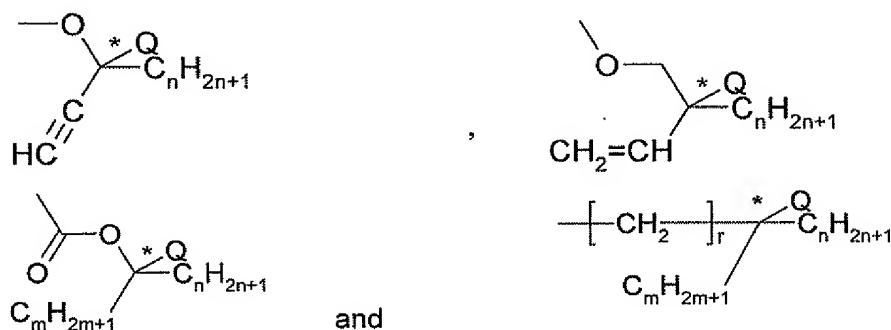
are hydrogen, halogen, aryl or cycloalkyl, alkyl or alkoxy having 1 to 11 C atoms, alkenyl, alkenyloxy, alkynyl or alkynyloxy having 2 to 11 C atoms, where one, two or more of the -CH2- groups present in the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally replaced by -O-, -C=O- or -S-, but where no two O atoms are bonded directly to one another and the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally substituted by halogen;

or

B)

R\*<sup>1</sup> is a chiral radical of one of the following formulae





and

in which

Q is H or halogen,  
 n and m are different from one another and, independently of one another, are 1 to 11,  
 p is 0 or 1, and  
 r is 0 to 4.

8. (Withdrawn) A method of providing a chiral dopant, or a stabiliser, or a chiral dopant and simultaneously a stabiliser to a liquid crystal mixture, comprising adding a compounds according to claim 3 to said liquid crystal mixture.

9. (Previously Presented) A liquid-crystal medium comprising a compound according to Claim 3.

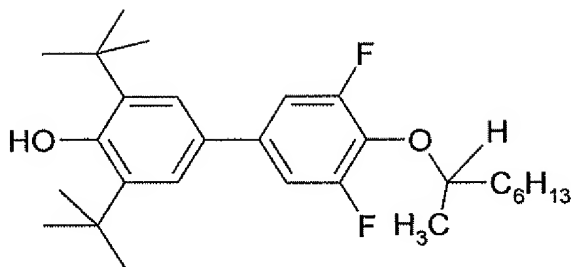
10. (Withdrawn) An electro-optical display comprising a liquid-crystal medium which comprises a compound according to claim 3.

11. (Cancelled)

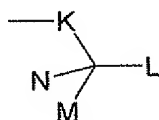
12. (Withdrawn) A process for preparing a liquid-crystal mixture, comprising mixing together a compound of formula I according to claim 3 with one or more liquid-crystal compounds other than a compound of formula I to form a liquid-crystal mixture.

13. (Cancelled)

14. (Previously Presented) A compound according to claim 4, which is

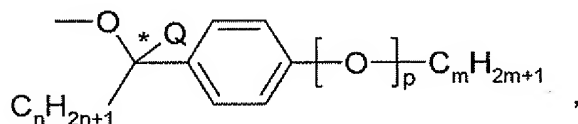


15. (Previously Presented) A compound according to claim 4, wherein  
 $R^{*1}$  is a chiral radical of the following formula

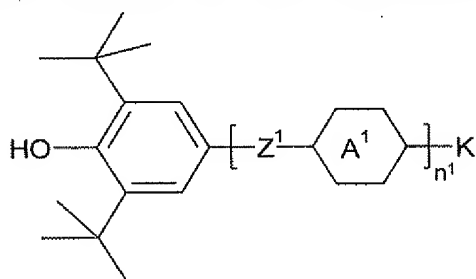


in which

K is a single bond, alkylene having 1 to 9 C atoms, alkenylene or alkynylene having 2 to 9 C atoms, wherein one, two or more of the  $-CH_2-$  groups present in the alkylene, alkenylene or alkynylene are optionally replaced by  $-O-$ ,  $-C=O-$  or  $-S-$ , but where no two O atoms are bonded directly to one another, and the alkylene, alkenylene or alkynylene are optionally substituted by halogen, or  
 $R^{*1}$  is



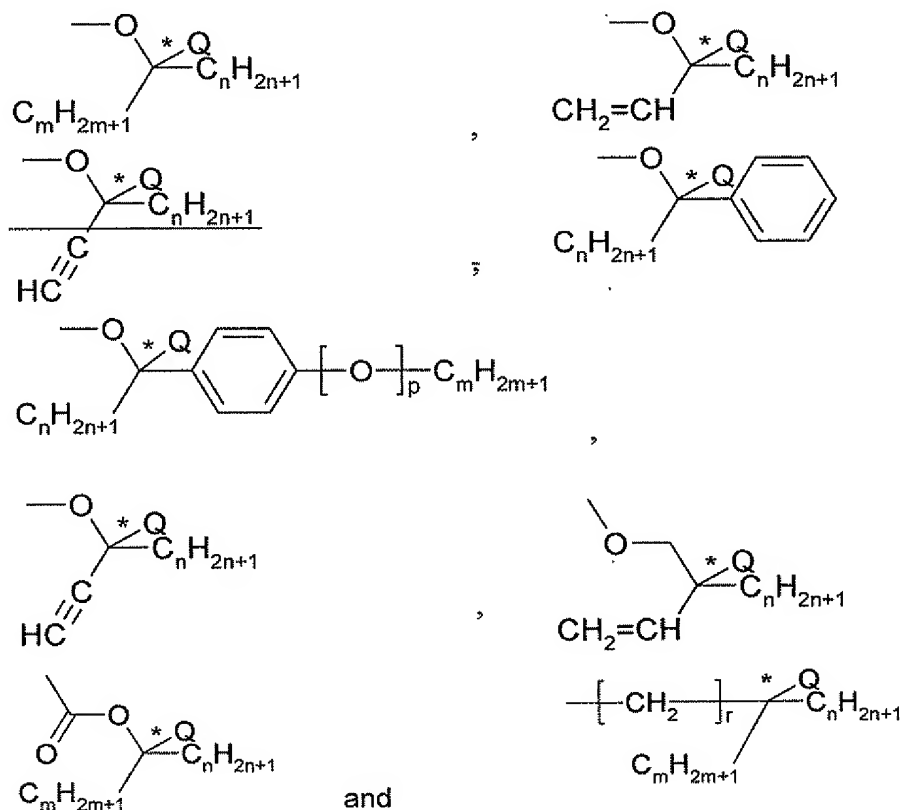
Q is H or halogen,  
 n and m are different from one another and, independently of one another, are 1 to 11,  
 p is 0 or 1, and  
 L, M and N, each, independently of one another, but differently from one another and from



are hydrogen, halogen, aryl or cycloalkyl, alkyl or alkoxy having 1 to 11 C

atoms, alkenyl, alkenyloxy, alkynyl or alkynyloxy having 2 to 11 C atoms, where one, two or more of the  $-\text{CH}_2-$  groups present in the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally replaced by  $-\text{O}-$ ,  $-\text{C}=\text{O}-$  or  $-\text{S}-$ , but where no two O atoms are bonded directly to one another and the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally substituted by halogen.

16. (Currently Amended) A compound according to claim 4, wherein  $\text{R}^{*1}$  is a chiral radical of one of the following formulae



in which

- Q is H or halogen,  
n and m are different from one another and, independently of one another, are 1 to 11,  
p is 0 or 1, and  
r is 0 to 4.

17. (Previously Presented) A compound according to claim 4, wherein W and Z are each, independently of one another, H, F or Cl.

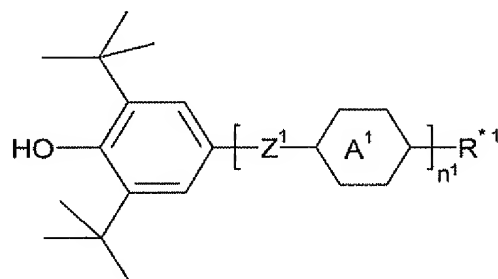


18. (Previously Presented)  
and Z are both H.

A compound according to claim 4, wherein W

19. (Previously Presented)

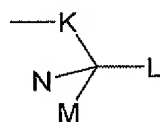
A compound of formula I



I

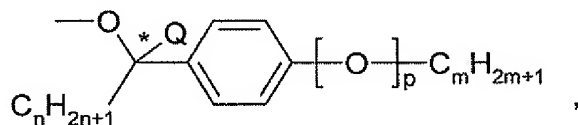
in which

R\*¹ is a chiral radical of the following formula



in which

K is a single bond, alkylene having 1 to 9 C atoms, alkenylene or alkynylene having 2 to 9 C atoms, wherein one, two or more of the -CH₂- groups present in the alkylene, alkenylene or alkynylene are optionally replaced by -O-, -C=O- or -S-, but where no two O atoms are bonded directly to one another, and the alkylene, alkenylene or alkynylene are optionally substituted by halogen, or R\*¹ is a group

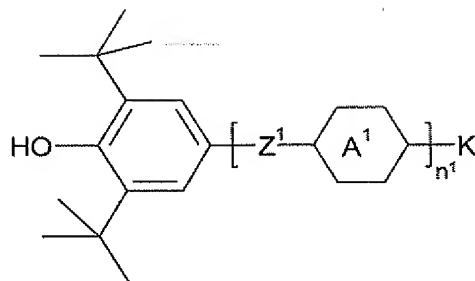


Q is H or halogen,

n and m are different from one another and, independently of one another, are 1 to 11,

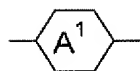
p is 0 or 1,

L, M and N, each, independently of one another, but differently from one another and from



are hydrogen, halogen, aryl or cycloalkyl, alkyl or alkoxy having 1 to 11 C atoms, alkenyl, alkenyloxy, alkynyl or alkynyloxy having 2 to 11 C atoms, where one, two or more of the  $\text{-CH}_2\text{-}$  groups present in the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally replaced by  $\text{-O-}$ ,  $\text{-C=O-}$  or  $\text{-S-}$ , but where no two O atoms are bonded directly to one another and the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally substituted by halogen,

$Z^1$  is, if present more than once, in each case, independently of one another,  $\text{-CH}_2\text{-CH}_2\text{-}$ ,  $\text{-CH=CH-}$ ,  $\text{-C}\equiv\text{C-}$ ,  $\text{-COO-}$ ,  $\text{-OCO-}$ ,  $\text{-CH}_2\text{O-}$ ,  $\text{-OCH}_2\text{-}$ ,  $\text{-CF}_2\text{O-}$ ,  $\text{-OCF}_2\text{-}$ ,  $\text{-(CH}_2\text{)}_4\text{-}$ ,  $\text{-CF=CF-}$ ,  $\text{-CH=CF-}$ ,  $\text{-CF=CH-}$ ,  $\text{-CH}_2\text{-}$ ,  $\text{-CF}_2\text{-}$ ,  $\text{-CHF-}$ ,  $\text{-O-}$ ,  $\text{-S-}$  or a single bond,



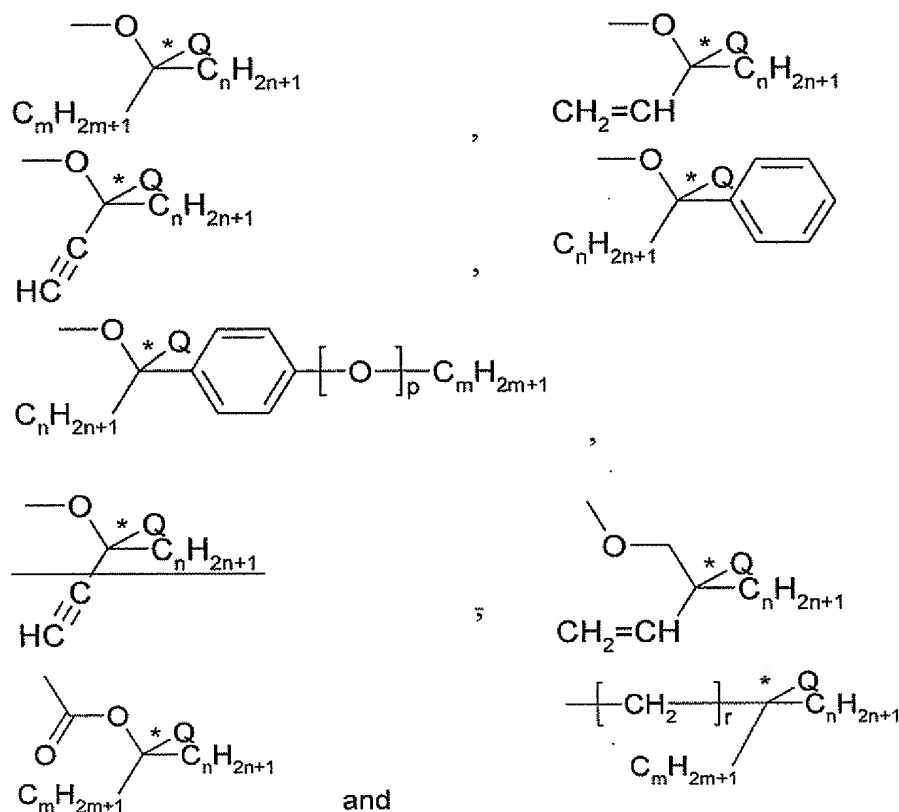
is, if present more than once, in each case, independently of one another,

- (a) a trans-1,4-cyclohexylene radical, in which one or more non-adjacent  $\text{CH}_2$  groups are optionally replaced by  $\text{-O-}$  and/or  $\text{-S-}$ ,
- (b) a 1,4-cyclohexenylene radical,
- (c) a 1,4-phenylene radical, in which one or two CH groups are optionally replaced by N, or
- (d) 1,4-bicyclo[2.2.2]octylene, piperidine-1,4-diyl, naphthalene-2,6-diyl, decahydronaphthalene-2,6-diyl, or 1,2,3,4-tetrahydronaphthalene-2,6-diyl,

where these radicals (a) to (d) and the phenolic benzene ring is optionally mono- or polysubstituted by F atoms, and

$n^1$  is 1, 2 or 3.

20. (Currently Amended) A compound according to claim 19, wherein  $R^{*1}$  is a chiral radical of one of the following formulae



in which

Q

is H or halogen,

n and m

are different from one another and, independently of one another, are 1 to 11,

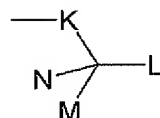
p

is 0 or 1, and

r

is 0 to 4.

21. (Previously Presented) A compound according to claim 7, wherein  $R^{*1}$  is a chiral radical of the following formula

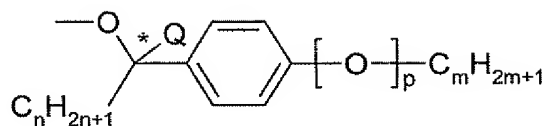


in which

K

is a single bond, alkylene having 1 to 9 C atoms, alkenylene or alkynylene having 2 to 9 C atoms, wherein one, two or more of the  $-CH_2-$  groups present in the alkylene, alkenylene or alkynylene are optionally replaced by  $-O-$ ,  $-C=O-$  or  $-S-$ , but where no two O atoms are bonded directly to one another, and the alkylene, alkenylene or alkynylene are optionally substituted by halogen, or

$R^{*1}$  is

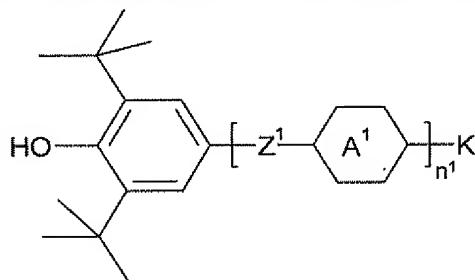


Q is H or halogen,

n and m are different from one another and, independently of one another, are 1 to 11,

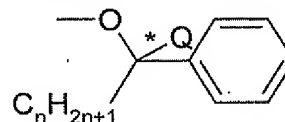
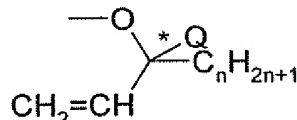
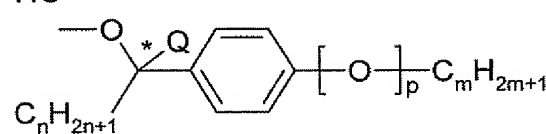
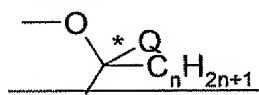
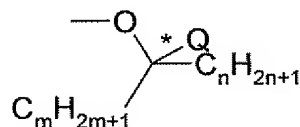
p is 0 or 1, and

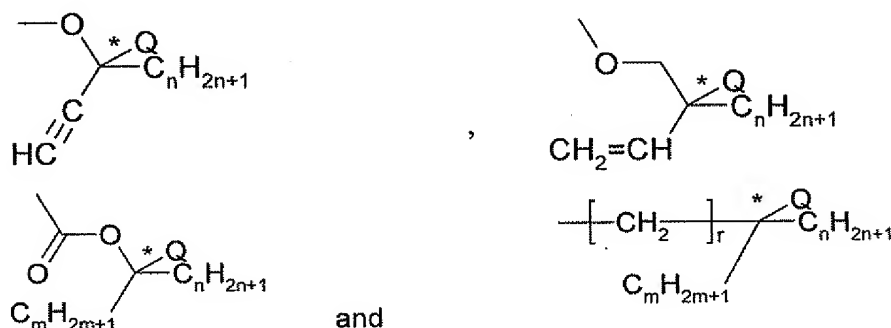
L, M and N, each, independently of one another, but differently from one another and from



are hydrogen, halogen, aryl or cycloalkyl, alkyl or alkoxy having 1 to 11 C atoms, alkenyl, alkenyloxy, alkynyl or alkynyloxy having 2 to 11 C atoms, where one, two or more of the  $-CH_2-$  groups present in the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally replaced by  $-O-$ ,  $-C=O-$  or  $-S-$ , but where no two O atoms are bonded directly to one another and the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally substituted by halogen.

22. (Currently Amended) A compound according to claim 7, wherein  $R^{*1}$  is a chiral radical of one of the following formulae





in which

Q is H or halogen,  
 n and m are different from one another and, independently of one another, are 1 to 11,  
 p is 0 or 1, and  
 r is 0 to 4.

23. (Cancelled)

24. (Previously Presented) A compound according to claim 5, wherein K is a single bond, -CH<sub>2</sub>-, -O-, -CO-O-, -CO-O-CH<sub>2</sub>-, -O-CO-, -CH<sub>2</sub>-CH<sub>2</sub>-, -CH=CH- or -C≡C-.

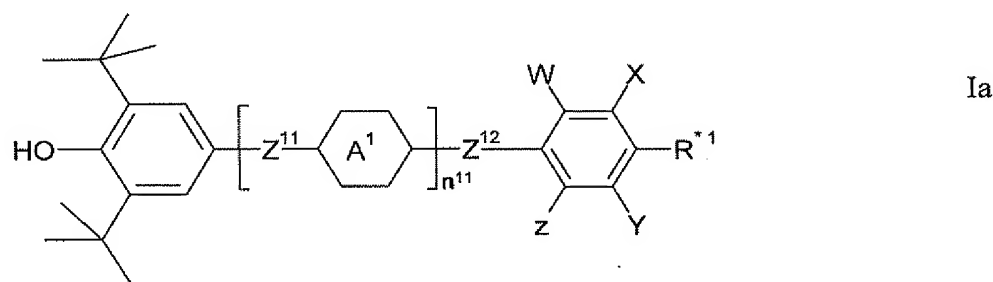
25. (Previously Presented) A compound according to claim 15, wherein K is a single bond, -CH<sub>2</sub>-, -O-, -CO-O-, -CO-O-CH<sub>2</sub>-, -O-CO-, -CH<sub>2</sub>-CH<sub>2</sub>-, -CH=CH- or -C≡C-.

26-28. (Cancelled)

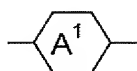
29. (Previously Presented) A compound according to claim 5, wherein L, M and N are each, independently of one another, hydrogen, halogen, alkyl or alkoxy having 1 to 11 C atoms, alkenyl, alkenyloxy, alkynyl or alkynyloxy having 2 to 11 C atoms, where one, two or more of the -CH<sub>2</sub>- groups present are optionally replaced by -O-, -C=O- or -S-, but where no two O atoms are bonded directly to one another, and are optionally substituted by halogen.

30. (Previously Presented) A compound according to claim 15, wherein L, M and N are each, independently of one another, hydrogen, halogen, alkyl or alkoxy having 1 to 11 C atoms, alkenyl, alkenyloxy, alkynyl or alkynyloxy having 2 to 11 C atoms, where one, two or more of the -CH<sub>2</sub>- groups present are optionally replaced by -O-, -C=O- or -S-, but where no two O atoms are bonded directly to one another, and are optionally substituted by halogen.

31. (Previously Presented) A compound according to claim 29, wherein L, M and N are each, independently of one another, hydrogen, halogen, alkyl or alkoxy having 1 to 11 C atoms, alkenyl, alkenyloxy, alkynyl or alkynyloxy having 2 to 11 C atoms.
32. (Previously Presented) A compound according to claim 30, wherein L, M and N are each, independently of one another, hydrogen, halogen, alkyl or alkoxy having 1 to 11 C atoms, alkenyl, alkenyloxy, alkynyl or alkynyloxy having 2 to 11 C atoms.
33. (Cancelled)
34. (Withdrawn) A method of providing a chiral dopant, or a stabiliser, or a chiral dopant and simultaneously a stabiliser to a liquid crystal mixture, comprising adding to said liquid crystal mixture a compound according to claim 4.
35. (Withdrawn) An electro-optical display comprising a liquid-crystal medium comprising a compound according to claim 4.
- 36-41. (Cancelled)
42. (Previously Presented) An electro-optical display comprising a liquid-crystal medium which comprises a compound according to claim 7.
43. (Currently Amended) A liquid crystal mixture containing at least two liquid crystalline compounds one of which is a compound of formula Ia



in which



is, if present more than once, in each case, independently of one another,

- (a) a trans-1,4-cyclohexylene radical, in which one or more non-adjacent CH<sub>2</sub> groups are optionally replaced by -O- and/or -S-,
- (b) a 1,4-cyclohexenylene radical,
- (c) a 1,4-phenylene radical, in which one or two CH groups are optionally replaced by N, or
- (d) 1,4-bicyclo[2.2.2]octylene,  
piperidine-1,4-diyl, naphthalene-2,6-diyl,  
decahydronaphthalene-2,6-diyl, or  
1,2,3,4-tetrahydronaphthalene-2,6-diyl,

where these radicals (a) to (d) and the phenolic benzene ring is optionally mono- or polysubstituted by F atoms,

R<sup>\*1</sup> is a chiral radical,

Z<sup>11</sup> and Z<sup>12</sup> are, each independently, and in case if Z<sup>11</sup> present more than once, in each case, independently of one another, -CH<sub>2</sub>-CH<sub>2</sub>-, -CH=CH-, -C≡C-, -COO-, -OCO-, -CH<sub>2</sub>O-, -OCH<sub>2</sub>-, -CF<sub>2</sub>O-, -OCF<sub>2</sub>-, -(CH<sub>2</sub>)<sub>4</sub>-, -CF=CF-, -CH=CF-, -CF=CH-, -CH<sub>2</sub>-, -CF<sub>2</sub>-, -CHF-, -O-, -S- or a single bond,

n<sup>11</sup> is 0, 1 or 2,

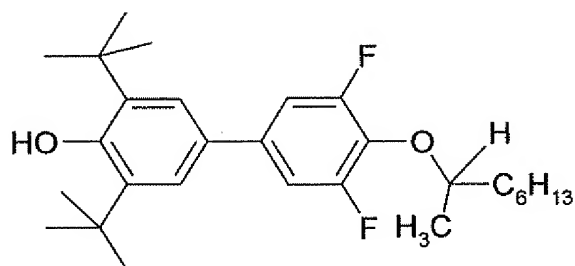
W and Z are each, independently of one another, H, F, Cl, or alkoxy, and

X and Y are each, independently of one another, H, F, Cl, alkyl or alkoxy,

wherein

A)

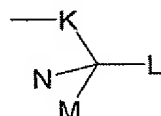
the compound of formula Ia is



or

B)

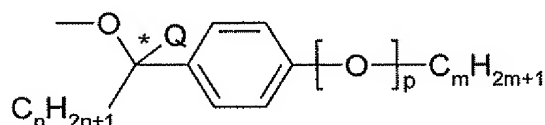
R<sup>\*1</sup> is a chiral radical of the following formula



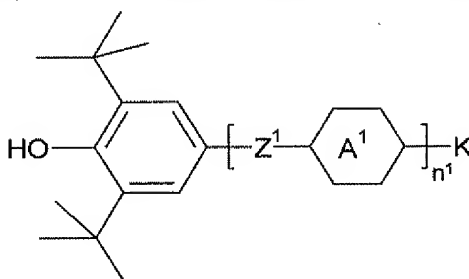
in which

K is a single bond, alkylene having 1 to 9 C atoms, alkenylene or alkynylene having 2 to 9 C atoms, wherein one, two or more of the  $-\text{CH}_2-$  groups present in the alkylene, alkenylene or alkynylene are optionally replaced by  $-\text{O}-$ ,  $-\text{C}=\text{O}-$  or  $-\text{S}-$ , but where no two O atoms are bonded directly to one another, and the alkylene, alkenylene or alkynylene are optionally substituted by halogen, or

$\text{R}^{*1}$  is



Q is H or halogen,  
 n and m are different from one another and, independently of one another, are 1 to 11,  
 p is 0 or 1, and  
 L, M and N, each, independently of one another, but differently from one another and from

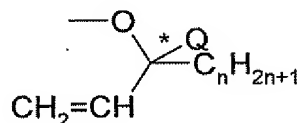
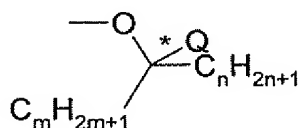


are hydrogen, halogen, aryl or cycloalkyl, alkyl or alkoxy having 1 to 11 C atoms, alkenyl, alkenyloxy, alkynyl or alkynyloxy having 2 to 11 C atoms, where one, two or more of the  $-\text{CH}_2-$  groups present in the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally replaced by  $-\text{O}-$ ,  $-\text{C}=\text{O}-$  or  $-\text{S}-$ , but where no two O atoms are bonded directly to one another and the alkyl, alkoxy, alkenyl, alkenyloxy, alkynyl or alkynyloxy are optionally substituted by halogen;

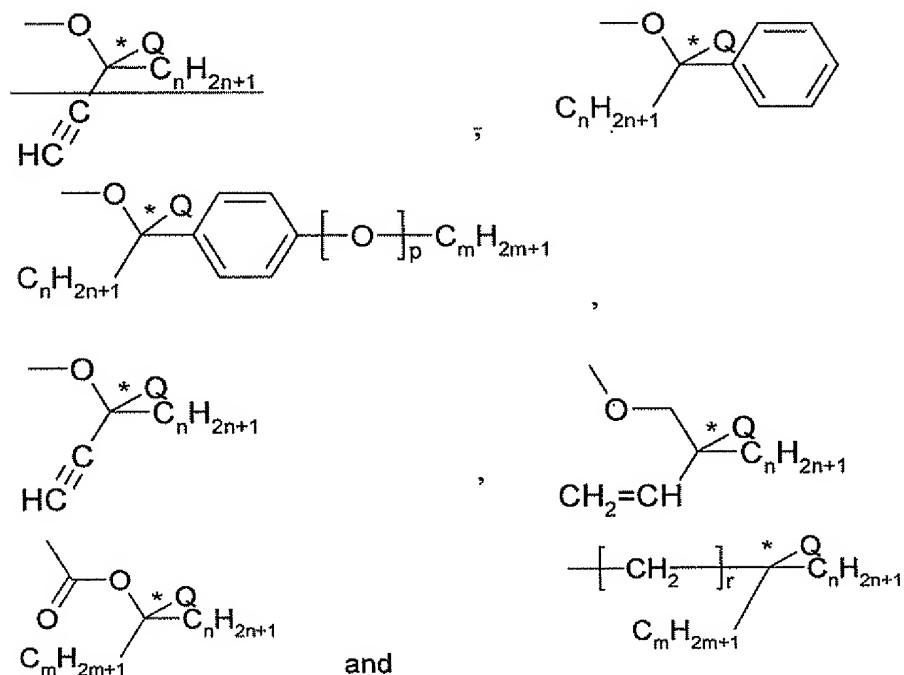
or

C)

$\text{R}^{*1}$  is a chiral radical of one of the following formulae







in which

Q is H or halogen,  
 n and m are different from one another and, independently of one another, are 1 to 11,  
 p is 0 or 1, and  
 r is 0 to 4.

44. (Previously Presented) A liquid crystal mixture according to claim 43, which comprises one or more compounds of formula Ia having an absolute value for the HTP of  $2.7 \mu\text{m}^{-1}$  or more.